AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method for applying a solderable, corrosion-resistant, tin-based coating having a resistance to tin whisker formation onto a metal surface of an electronic component, the method comprising:

depositing a first metal layer onto the metal surface, wherein the first metal layer comprises a Ni-based material comprising Ni and between about 0.1 wt% and about 0.4 wt% P, wherein the Ni-based material ~~metal or alloy which~~ establishes a diffusion couple with the tin-based coating that promotes a bulk material deficiency in the tin-based coating and, thereby, an internal tensile stress in the tin-based coating; and

depositing the tin-based coating over the first metal layer to a thickness between about 0.5 µm and about 2.5 µm.

2. (currently amended) The method of claim 1 wherein the depositing the first metal layer comprises electrolytic deposition from an electrolytic Ni bath having a pH between about 2 and about 2.5 ~~the first metal layer is a Ni-based material~~.

3. (original) The method of claim 1 wherein the metal surface of the electronic component is a metal selected from the group consisting of copper, copper alloys, iron, and iron alloys.

4. (currently amended) The method of claim 1 wherein the first metal layer ~~is a Ni-based material and~~ has a thickness between about 0.1 μm and about 20 μm.

5. (currently amended) The method of claim 1 wherein the first metal layer ~~is a Ni-based material and~~ has a thickness between about 0.1 μm and about 3 μm.

6. (original) The method of claim 1 wherein the electronic component is a lead line of an electronic package for incorporation into an electronic device.

7. (original) The method of claim 1 wherein the electronic component is a lead line of an electronic package for incorporation into an electronic device, and the method comprises:

depositing the first metal layer onto the metal surface of the lead line, wherein the first metal layer has a thickness between about 0.1 and about 20 μm and is a Ni-based material which establishes said diffusion couple with the tin-based coating that promotes said bulk material deficiency in the tin-based coating and, thereby, said internal tensile stress in the tin-based coating; and

depositing the tin-based coating over the first metal layer to the thickness between about 0.5 μm and about 2.5 μm.

8. (original) The method of claim 1 wherein the electronic component is a lead line of an electronic package for

incorporation into an electronic device, and the method comprises:

depositing the first metal layer onto the metal surface of the lead line, wherein the first metal layer has a thickness between about 0.1 and about 20 μm and is a Ni-based material which establishes said diffusion couple with the tin-based coating that promotes said bulk material deficiency in the tin-based coating and, thereby, said internal tensile stress in the tin-based coating; and

depositing the tin-based coating over the first metal layer to the thickness between about 0.5 μm and about 2.0 μm.

9. (currently amended) The method of claim 1 wherein depositing the first metal layer comprises electrolytic deposition from an electrolytic Ni bath comprising $Ni(NH_2SO_3)_2$, $NiCl_2 * 6 H_2O$, and H_3BO_3.

~~the electronic component is an electrical connector, and the method comprises:~~

~~depositing the first metal layer onto the metal surface of the electrical connector, wherein the first metal layer is a Ni-based material which establishes said diffusion couple with the tin-based coating that promotes said bulk material deficiency in the tin-based coating and, thereby, said internal tensile stress in the tin-based coating; and~~

~~depositing the tin-based coating over the first metal layer to the thickness between about 0.5 μm and about 2.5 μm.~~

10. (currently amended) The method of claim 1 wherein the depositing of the first metal layer comprises electrolytic deposition from an electrolytic Ni bath comprising between 319

and 383 g/L $Ni(NH_2SO_3)_2$, between 5 and 15 g/L $NiCl_2$ * 6 H_2O, and between 20 and 40 g/L H_3BO_3.

~~the electronic component is an electrical connector, and the method comprises:~~

~~depositing the first metal layer onto the metal surface of the electrical connector, wherein the first metal layer is a Ni-based material which establishes said diffusion couple with the tin-based coating that promotes said bulk material deficiency in the tin-based coating and, thereby, said internal tensile stress in the tin-based coating; and~~

~~depositing the tin-based coating over the first metal layer to the thickness between about 0.5 μm and about 2.0 μm.~~

11. (original) The method of claim 1 wherein the electronic component is a passive electronic device.

12. (original) The method of claim 1 wherein the electronic component is a chip capacitor or a chip resistor.

13. (currently amended) The method of claim 1 wherein the first metal layer has a thickness of about 2 μm.

~~2, 3, 4, 7, 8, 9, or 10 wherein the first metal layer Ni-based material further comprises P in an amount of less than about 0.5% by weight.~~

14. (cancelled)

15. (currently amended) The method of claim 1 ~~2, 3, 4, 7, 8, 9, or 10~~ wherein the first metal layer Ni-based material is

formed by electrodeposition from a bath comprising Ni ions and between about 5 and about 12 mL/L of a P-based additive.

16. (currently amended) A method for applying a solderable, corrosion-resistant, tin-based coating having a resistance to tin whisker formation onto a metal lead line for attachment by soldering in assembly of an electronic device, the method comprising:

depositing a first metal layer onto the metal surface, wherein the first metal layer comprises a Ni-based material comprising Ni and between about 0.1 wt% and about 0.4 wt% P, wherein the Ni-based material ~~metal or alloy which~~ establishes a diffusion couple with the tin-based coating that promotes a bulk material deficiency in the tin-based coating and, thereby, an internal tensile stress in the tin-based coating;

wherein the first metal layer Ni-based material is formed by electrodeposition from a bath comprising Ni ions and between about 5 and about 12 mL/L of a P-based additive; and

depositing the tin-based coating over the first metal layer to a thickness between about 0.5 µm and about 3.0 µm ~~4.0 µm~~.

17. (cancelled)

18. (currently amended) The method of claim 16 ~~17~~ wherein the metal lead line onto which the first metal layer and tin-based coating are deposited constitutes a segment of a lead frame to be incorporated into the electronic package.

19. (cancelled)

20. (currently amended) The method of claim 16 ~~18~~ wherein:

the depositing the first metal layer comprises depositing the Ni-based material to a thickness between about 0.1 and about 3 μm.

21 - 24. (cancelled)

25. (currently amended) A metal lead line for attachment by soldering of an electronic device in the assembly of an electronic package, wherein the lead line comprises a metal line with a Ni-based metal layer thereover and tin-based coating over the Ni-based metal layer, wherein the Ni-based metal layer has a thickness between about 0.1 μm and about 20 μm and the tin-based coating has a thickness between about 0.5 μm and about 3.0 μm, wherein the Ni-based material comprises Ni and between about 0.1 wt% and about 0.4 wt%, wherein the Ni-based metal layer establishes a diffusion couple with the tin-based coating that promotes a bulk material deficiency in the tin-based coating and, thereby, an internal tensile stress in the tin-based coating which inhibits whisker formation in the tin-based coating.

26 - 27. (cancelled)